

What is claimed is:

1 1. A drive device for a mechanical press with a two-step speed reduction mechanism
2 for driving a slide of the mechanical press comprising:

3 a drive pinion provided concentrically with a crankshaft;

4 a main gear mounted on said crankshaft;

5 intermediate gears meshing with said drive pinion; and

6 intermediate pinions meshing with said main gear; wherein a plurality of said

7 intermediate gears and said intermediate pinions are concentrically provided with each other.

1 2. A drive device for a mechanical press described in claim 1, further comprising:

2 a second set of intermediate gears, wherein said intermediate gears and said

3 second set of intermediate gears are located on opposite sides of said drive pinion in symmetric
4 positions; and

5 a second set of intermediate pinions, wherein said intermediate pinions and said

6 second set of intermediate pinions are located on opposite sides of said main gear on symmetric
7 positions.

1 3. A drive device for a mechanical press described in claim 1, further comprising:

2 a drive shaft having an end on which said drive pinion is provided, said drive

3 shaft rotatably engages a hole formed on an end of said crankshaft in order to support another

4 end of the drive shaft.

1 4. A drive device for a mechanical press described in claim 2, further
2 comprising:
3 a drive shaft having an end on which said drive pinion is provided, said
4 drive shaft rotatably engages a hole formed on an end of said crankshaft in order to
5 support another end of the drive shaft.

1 5. A drive device for a mechanical press with a two-step speed reduction
2 mechanism for driving a slide of the mechanical press comprising:
3 a drive pinion provided concentrically with a crankshaft;
4 a main gear mounted on said crankshaft;
5 intermediate gears meshing with said drive pinion;
6 intermediate pinions meshing with said main gear; wherein a plurality of
7 said intermediate gears and said intermediate pinions are concentrically provided with
8 each other; and
9 a brake comprising:
10 a break shaft; and
11 a brake pinion formed on said brake shaft and meshing with said
12 intermediate gears.

1 6. A drive device for a mechanical press described in claim 5, further
2 comprising:
3 a second set of intermediate gears, wherein said intermediate gears and
4 said second set of intermediate gears are located on opposite sides of said drive pinion in
5 symmetric positions; and
6 a second set of intermediate pinions, wherein said intermediate pinions
7 and said second set of intermediate pinions are located on opposite sides of said main
8 gear on symmetric positions.

1 7. A drive device for a mechanical press described in claim 5, further
2 comprising:
3 a drive shaft having an end on which said drive pinion is provided, said
4 drive shaft rotatably engages a hole formed on an end of said crankshaft in order to
5 support another end of the drive shaft.

1 8. A drive device for a mechanical press described in claim 6, further
2 comprising:
3 a drive shaft having an end on which said drive pinion is provided, said
4 drive shaft rotatably engages a hole formed on an end of said crankshaft in order to
5 support another end of the drive shaft.

1 9. A drive device for a mechanical press with a two-step speed reduction
2 mechanism for driving a slide of the mechanical press comprising:

3 a drive pinion provided concentrically with a crankshaft;
4 a main gear mounted on said crankshaft;
5 an intermediate gear meshing with said drive pinion; and
6 an intermediate pinion meshing with said main gear; wherein said
7 intermediate gear and said intermediate pinion are concentrically provided with each
8 other.